

IN THE CLAIMS:

Claim 1. (Currently amended) A waste gas treatment system using biological treatment technology[[,]] comprising:

a ~~dust/grease~~ dust and grease filtering device for filtering waste gas to be treated;

a directional gas flow device[[,]] having a valve, ~~at least one~~ a gas inlet and at least two gas ~~outlet~~ outlets, the ~~at least one~~ gas inlet ~~connecting being connected to~~ the ~~dust/grease~~ filtering device, the valve being adapted to control the waste gas to flow toward one of the ~~at least two~~ gas outlets;

a biological treatment system[[,]] including a top, a bottom and ~~at least one~~ a biological reactor, the top and bottom of the biological treatment system ~~connecting being connected~~ to the ~~at least two~~ outlets of the directional gas flow device, respectively; the ~~at least one~~ biological reactor being in association with one another and a microorganism contained therein is adapted to be immobilized onto support material, wherein the microorganism is selected from the group consisting of Escherichia coli, Desulfovibrio desulfuricans, Gordonia terrae, Proteus vulgaris, Geobacter sulfurreducens, Clostridium butyricum, Bacillus subtilis, Clostridium beijerinckii, Rhodospirillum rubrum, Acidithiobacillus ferrooxidans, Pseudomonas putida, Arthrobacter oxydans, Cellulosimicrobium cellulans, Paracoccus denitrificans, Thiobacillus sp., Ochrobactrum sp., Citrobacter sp., Pseudomonas sp., Arthrobacter sp., Paenibacillus sp., Microbacterium sp., Stenotrophomonas sp., Lactobacillus sp., Acetobacter sp., Arthrobacter sp., Bacillus sp., Cellulomonas sp., Clostridium sp., Klebsiella sp., Lactobacillus sp., Leuconostoc sp., Nitrobacter sp., Rhizobium sp., Streptococcus sp., Streptomyces sp., Thermoactinomyces sp., Thermomonospora sp., Thermopolyspora sp., Aspergillus sp., and Thermomyces sp.; and

a bioaerosol removal device ~~connecting~~ connected to the biological treatment system.

Claim 2. (Original) The waste gas treatment system as claimed in Claim 1, wherein the filtering device has a container filled with a filler forming pores being less than 100 mesh.

Claim 3. (Original) The waste gas treatment system as claimed in Claim 1, wherein the filtering device has at least a pipeline filled with a filler forming pores being less than 100 mesh.

Claim 4. (Previously presented) The waste gas treatment system as claimed in Claim 2, wherein the filler has a shape selected from one of a powder, particle and column shape.

Claim 5. (Original) The waste gas treatment system as claimed in Claim 1, wherein the valve is a manual valve.

Claim 6. (Original) The waste gas treatment system as claimed in Claim 1, wherein the valve is a semi-electric valve.

Claim 7. (Original) The waste gas treatment system as claimed in Claim 1, wherein the valve is a electric valve.

Claim 8. (Original) The waste gas treatment system as claimed in Claim 1, wherein the bioaerosol removal device is a thermal device.

Claim 9. (Original) The waste gas treatment system as claimed in Claim 1, wherein the bioaerosol removal device includes an ultraviolet light.

Claim 10. (Original) The waste gas treatment system as claimed in Claim 1, wherein the bioaerosol removal device includes a container filled with a filler being adapted to kill or inhibit microorganism.

Claim 11. (Original) The waste gas treatment system as claimed in Claim 10, wherein the filler has a shape selected from one of a powder, particle and column shape.

Claim 12. (Original) The waste gas treatment system as claimed in Claim 11, wherein the filler is made of the materials selected from one of dioxygen chloride, bleach, liquid chlorine, alcohol, acid, base, phenol, antibiotic and chloroamine.

Claim 13. (Original) The waste gas treatment system as claimed in Claim 1, wherein the bioaerosol removal device includes a container filled with a filler which is immersed in a solvent being adapted to kill or inhibit microorganism.

Claim 14. (Original) The waste gas treatment system as claimed in Claim 13, wherein the filler has a shape selected from one of a powder, particle and column shape.

Claim 15. (Original) The waste gas treatment system as claimed in Claim 13, wherein the filler is made of materials selected from one of zeolite, andesite, activated carbon, ferric hydroxide, activated bauxite, perlite, polystyrene, peat, ceramic and compost.

Claim 16. (Original) The waste gas treatment system as claimed in Claim 1, wherein the microorganism contained is immobilized onto the support by a measure selected from one of covalent bonding, encapsulation, crosslinking and micro-particle encapsulation.

Claim 17. (Original) The waste gas treatment system as claimed in Claim 16, wherein the microorganism contained is immobilized onto the support by covalent bonding, wherein the support is made of the materials selected from

one of porous glass, ceramic, stainless steel, gravel sand, synthetic polymer and metallic oxide.

Claim 18. (Original) The waste gas treatment system as claimed in Claim 16, wherein the microorganism contained is immobilized onto the support by adsorption, wherein the support is made of the materials selected from one of activated carbon, peat, compost, bark, vermiculite, oyster shell, zeolite, andesite, activated bauxite, perlite, polystyrene, synthetic material, cation exchange resin and anion exchange resin.

Claim 19. (Original) The waste gas treatment system as claimed in Claim 16, wherein the microorganism contained is immobilized onto the support by encapsulation, wherein the support is made of the materials selected from one of polyacrylamide, photo-crosslinking pre-polymer, urethane pre-polymer, calcium alginate, alginate derivatives, collagen, gelatin, bovine, albumin and agar.

Claim 20. (Original) The waste gas treatment system as claimed in Claim 16, wherein the microorganism contained is immobilized onto the support by crosslinking, wherein the support is made of the materials selected from one of dimethyl-adipimide, dimethyl suberimide, aliphatic diamines and diamines.

Claim 21. (Original) The waste gas treatment system as claimed in Claim 16, wherein the microorganism contained is immobilized onto the support by encapsulation, which is selected from one of the surface polymerization, liquid surface drying, phase separation, liposome encapsulation, hollow fiber encapsulation and the like.

Claim 22. (Original) The waste gas treatment system as claimed in Claim 1, further comprising a ventilating fan disposed between the filtering device and the directional gas flow device.

Claim 23. (Currently amended) A waste gas treatment system using biological treatment technology~~[[,]]~~ comprising:

a ~~dust/grease~~ dust and grease filtering device for filtering waste gas to be treated;

a biological treatment system~~[[,]]~~ connecting to the ~~dust/grease~~ filtering device, the biological treatment system including at least one biological reactor **being** in association with one another and a microorganism contained therein **is** adapted to be immobilized onto support material; and

a bioaerosol removal device ~~connecting~~ connected to the biological treatment system.

Claim 24. (Currently amended) A waste gas treatment system using biological treatment technology~~[[,]]~~ comprising:

a ~~dust/grease~~ dust and grease filtering device for filtering waste gas to be treated;

a directional gas flow device~~[[,]]~~ having a valve, ~~at least one~~ a gas inlet and at least two gas ~~outlet~~ outlets, the ~~at least one~~ gas inlet ~~connecting~~ being connected to the ~~dust/grease~~ filtering device, the valve being adapted to control the waste gas to flow toward one of the ~~at least two~~ gas outlets; and

a biological treatment system~~[[,]]~~ including a top, a bottom and ~~at least one~~ a biological reactor, the top and bottom of the biological treatment system ~~connecting~~ being connected to the ~~at least two~~ outlets of the directional gas flow device, respectively; the ~~at least one~~ biological reactor being in association with one another and a microorganism contained therein is adapted to be immobilized onto support material.

Claims 25-33. (Canceled)

Claim 34. (Previously presented) The waste gas treatment system as claimed in Claim 3, wherein the filler has a shape selected from one of a powder, particle and column shape.